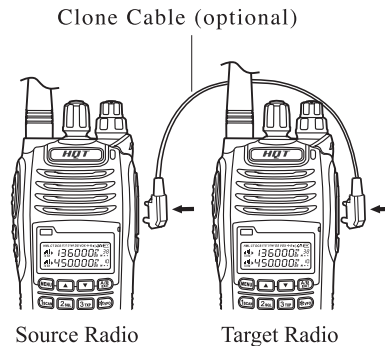


Wired Clone

1. Turn clone function by programming software or contact your local dealer.
2. Connect Source radio and target radio with clone cable.
3. Hold down [SK2] on Source Radio, then power it up. About 3 seconds later, the LED glows red, which means the Source Radio is ready for cloning.
4. Press [SK2] on Source Radio again, and the LED on Source Radio flashes red and LED on Target Radio flashes green. The LED on Target Radio goes out when the cloning is finished.
5. Replace the Target Radio with another, then press [SK2] on Source Radio to begin cloning.

Tip: if the LEDs on both Source Radio and Target Radio flashes red and green alternatively, it means the cloning fails.



Optional Accessory

Optional accessories are available according to your requirements. All HQT accessories with good quality will ensure you clear communication and outstanding performance.



Clone Line



Programming Cable



External Headset

Questions and Answers

Please check the machine following form before you ensure the machine has fault. If the problem is still existed, please initialize the machine to rectify incorrect operation.

Problem	Possible Causes	Solution
No Power	1.Battery is improperly installation 2.Battery power is exhausted 3.Battery aging	1.Install the battery again 2.Charge the battery 3.Change another battery
Receiving light remains on, but the speaker is silent	1.Volume switch is not in proper place 2.Ensure CTCSS/CDCSS is the same with your group's. 3.Ensure you use the right mute method	1.Check and adjust volume switch 2.Change CTCSS/CDCSS 3.Change mute method
No sound in radio mode	1.Assemble accompanying antenna incorrectly 2.The local radio FM signal is too weak	1.Assemble antenna in correct way 2.Move to place where radio signal is strong or press ▼ key to reset radio, then press ▲ key again to select the radio frequency
No response buttons, PTT key is unavailable	1.Check whether the keyboard is lock 2.Check whether radio function is on and screen displays "FM"	1.Unlock the keyboard 2.Quit FM radio mode
Receiving light remains on, can not transmit	Check whether to forbid transmit	Close "forbid transmit" function
can not save some function setting	can not set in channel mode	Change to frequency mode
Auto-transmit in waiting mode	VOX level is too low	Close VOX function or set VOX in high level
Receive voice of non-group member or interference signals	communication frequency or CTCSS/CDCSS of non-group is the same with yours	Change communication frequency or CTCSS/CDCSS

Maintenance

Your radio is a product with excellent design and technology, please treat it with care. These recommendations can help you effectively use the radio.

- Keep the radio dry. Rain, moisture or other liquid may cause damage to the radio.
- Do not throw, hit or vibrate the radio. Brutal treatment may damage the inner IC or other elements.
- Do not hold the radio by the antenna or external MIC.
- Please use the original or standard antenna. Unapproved antenna or modifications of accessories may cause damage to the radio.
- Use lint-free cloth to clean the dust or stains on the radio.
- Cover the earphone/microphone pad when not using the radio.
- Use mild detergent (not corrosive chemicals) and cloth to clear the casing, control knob and keyboard after long-time use.



Note:

All recommendations above also refer to your battery, charger and accessories. If any of them works abnormally, please send it to nearest service center.

Service and Support

Shenzhen HQT Science & Technology Co., Ltd. provides longtime support for its products, including repair and supply of the radio and its parts.

Service Commitment

1. HQT two-way radio body has an 18-month guarantee; accessories (battery, charge adapter, charger and antenna) 6 months; earphone 3 months.

Replacement is available subject to the presentation

2. of fully-filled warranty card or original purchasing invoice in case that the radio cannot work normally due to non-personal cause within the guarantee.
3. Replacement and repair is available subject to the presentation of fully-filled warranty card or original purchasing invoice in case that the radio or accessories cannot work normally within 30 days from the purchase date.
4. The repaired parts have its own guaranty or 90-day guaranty from the repair date. The longer one is valid.

Warranty

1. The guaranty is only valid under normal use. And

guaranty is unavailable under such conditions: dissembling or modifications, damages caused by outside force, water let-in, fire burning, and usage of unapproved accessories or antenna, not according to the instruction manual and so on.

2. The guaranty is in effect from the purchase date on the invoice.
3. Free repair is unavailable if the HQT mark or Serial Number mark is torn off.
4. Only the fully-filled warranty card and original purchasing invoice with HQT seal or dealer's seal affixed is valid for identifying the guarantee.

Caution

1. Read the user manual before use the radio.
2. Do not use the radio with damaged antenna. Use the radio only with standard antenna.
3. Turn off the radio in potential dangerous environment.
4. Avoid the contact between battery and metal objects, oily objects or corrosive objects.
5. Do not dip the radio or battery into water or throw them in fire.
6. Use the radio only with standard battery, adapter, charger and earphone.

Terms of Warranty

1. HQT two-way radio body has an 18-month guarantee; accessories (battery, charge adapter, charger and antenna) 6 months; earphone 3 months.
2. Only the fully-filled warranty card or original purchasing invoice with HQT's seal or dealer's seal affixed is valid for identifying the guarantee. (The invoice should give clear indication of accessories, radio, serial-number, purchasing date, purchasing price and other items.)
3. If the radio body went wrong within the guarantee, it should be ensured to work normally over 30 days after the repair.
4. Replacement and repair is available subject to the presentation of fully-filled warranty card or original purchasing invoice in case that the radio cannot work normally as the instruction says within 30 days from the purchase date. (Note that there must not be visible abrasion on radio body and accessories.)
5. Replacement of the same model is available subject to the presentation of 3-time repair receipt in case that the radio body still work abnormally after three-time-or-above repairs within the guarantee.
6. Repair of accessories (battery, adapter, charger and antenna) is available to the presentation of both fully-filled warranty card and original purchasing invoice.
7. The cost of materials and repair are covered in guarantee.

8. Guarantee is unavailable in case that the HQT mark or the serial-number mark is torn off.

9. Guarantee is unavailable in cases below:

- 1) Beyond the warranty period;
- 2) Defects or damages under abnormal use;
- 3) Defects or damages because of mis-operation, accident, water penetration and carelessness;
- 4) Defects or damages because of incorrect testing, operation, repair, installation, reconfiguration or adjustment;
- 5) Defects or damages to antenna because of non-material or non-processing problems;
- 6) Defects or damages because of unauthorized repair and disassembling;
- 7) Product that the serial-number marks is torn off or unable to identify;
- 8) Product with unclear purchasing date;
- 9) Battery under such conditions:
 - a. Any damages or unsealing to the battery pack;
 - b. Defects or damages to battery because of charging with improper equipment or use beyond regulated maintain condition;
- 10) Abrasion under normal use.

Note: The warranty ordinance, which is in accord with Chinese warranty regulations, will be modified properly according to marketing. If modified, the warranty ordinance is subject to our latest updating notice issued by HQT service center.

Appendix

Appendix I: Specification

Item	TH-2890
Frequency Range	400~470MHz/136~174MHz
Channel Number	199
Normal Voltage	DC 7.4V
Working Temperature	-25℃~55℃
Li-ion Battery	1600mAh
Working Method	Same-frequency Simplex / Different Frequency Simplex / Duplex Mode
Output Power	5W/1W

Modulation Mode	FM
Max. Frequency Deviation	$\leq \pm 2.5\text{KHz}$
Audio Distortion	$\leq 5\%$
Frequency Stability	$\pm 2.5\text{PPM}$
Receiving Sensitivity	0.2 μV
Audio Power	$\geq 700\text{mW}$
Weight	230g
Dimension	118×62×35mm

Appendix II: Technical Terms

Name	Description
Standby	The radio is in receiving mode when no key is operated.
CTCSS /CDCSS	CTCSS/CDCSS is a kind of signaling attached to audio signal. If CTCSS/CDCSS of the transmitter is the same as that of the receiver, the speaker is unmuted and the sound comes out. Otherwise the sound can not come out.
Battery Save	If there is no signal being received or no operation being conducted for some time, the radio will enter into power saving mode. In this mode, the radio will stop working at regular intervals to save power.
TOT	The time out timer is used to prevent someone from using the same channel for a long time and meanwhile avoid damage to the radio due to long-time transmission.
Squelch	This is to solve the problem of talk quality and noise. Squelch is to suppress the background noise and keep the radio quiet when no signal is received. It can mute the radio when no signal is received. Turn on the Squelch, and you will hear the sound from the speaker.

Squelch On	Under such condition, the radio is receiving all the audio signals (even if the signal is noise signal.)
Monitor	This function enables you to hear all the calls even with unmatched CTCSS/CDCSS.
Scan	A way to hear conversations on all channels.
BCL	When this channel is in use by other users, your radio is prohibited to transmit on the channel to avoid interference.
VOX	VOX enables user to speak into the radio without pressing [PTT] key and the sound is transmitted.
Wired Clone	This is a way to clone parameters from one radio to another one.
Revert Channel	Revert channel refers to the current working channel when pressing [PTT] key during scan.

Appendix III: Frequency Chart (Used to record the frequency.)

Model:

Serial number:

Channel	Tx Frequency	Tx CTCSS/CDCSS	Rx Frequency	Rx CTCSS/CDCSS	Optional Signaling
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Safetytraining Information



Your radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as "ccupational Use Only" meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is NOT intended for use by the "eneral Population" in an uncontrolled environment.

This radio has been tested and complies with the FCC RF exposure limits for "ccupational Use Only". In addition, your Shenzhen HQT Science&Technology Co.,Ltd. radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

1. FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to

Radio Frequency Electromagnetic Fields.

2. American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure

to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

3. American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially

Hazardous Electromagnetic Fields— RF and Microwave.

4. The following accessories are authorized for use with this product. Use of accessories other than those (listed in the instruction) specified may result in RF exposure levels exceed the FCC requirements for wireless RF exposure.



To ensure that your expose to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

1. DO NOT operate the radio without a proper antenna attached, as this may damaged the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.

2. DO NOT transmits for more than 50% of total radio use time ("50%duty cycle"). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "TX indicator" lights red. You can cause the radio to transmit by pressing the "PTT" switch.

3. ALWAYS keep the antenna at least 2.5 cm (1 inch) away from the body when transmitting and only use the HQT belt-clip which is listed in instructions when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from your

mouth, and slightly off to one side.

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to as*sure that this radio operates with the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During transmissions, your Shenzhen HQT

Science&Technology Co.,Ltd. radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

Occupational/Controlled Use

The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.